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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/796,752	02/06/1997	KOJI ARAI	614.1804/HJS	9335

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EXAMINER

NGUYEN, PHUONGCHAU BA

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 11/05/2003

39

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/796,752

Applicant(s)

ARAI, KOJI

Examiner

Phuongchau Ba Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8-21-03 RCE.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5, 8, 9, 11, 12, 22-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-5, 8, 9, 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 22-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections – 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 22-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 22 recites the limitation "said terminal" in lines 11-12, claim 23 in lines 9 and 11. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections – 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 22–25 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura (5,400,024).

Regarding claim 22:

Nishimura discloses in figure 1 a communication method for a radio LAN system, comprising:

Receiving a first slot having first signals for a first terminal and a second slot having second signals for a second terminal {col.2, lines 4–6};

Dividing said first signals of said first slot into at least a first part and a second part {col.2, lines 14–20};

Converting said first part into a first converted part having a lower transmitting rate than that of said first part {col.2, lines 20–31}

Converting said second part into a second converted part having a lower transmitting rate than that of said second part {col.2, lines 20–31}; and

Transmitting said first converted part from a first base station to said terminal and transmitting said second converted part from a second base station to said terminal, wherein said first base station and said second base station simultaneously transmit signals belonging to said first signals for said

first terminal {col.2, lines 32-41; Nishimura's system is a cellular system thus each cell has a base station providing signals to all mobile stations within its cell. Hence, when a mobile station of cell 1 moves to cell 2, normally it crosses an overlapping part of cell 1 and cell 2 (although Nishimura does not explicitly disclose the overlapping feature between cells, but this overlapping is inherent in cellular system wherein a mobile station is on the move from a cell to another---emphasis added). Therefore, in the overlapping part of the two cells 1-2, the moving mobile station receives both signals from base station 1 of the cell 1 and from base station 2 of cell 2. Also, because signal 64 kbps was being divided (demultiplexed) into a plurality of 11.2 kbps signals, thus 11.2 kbps signals were transmitted from n base stations to mobiles within its cell simultaneously---emphasis added}.

Regarding claim 23:

Nishimura discloses an apparatus for a radio LAN system, comprising:

Receiving unit receiving a first slot having first signals for a first terminal and a second slot having second signals for a second terminal {col.2, lines 4-6};

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Dividing unit dividing said first signals of said first slot into at least a first part and a second part {col.2, lines 14–20};

Converting said first part into a first converted part having a lower transmitting rate than that of said first part {col.2, lines 20–31}

Converting unit converting said second part into a second converted part having a lower transmitting rate than that of said second part {col.2, lines 20–31}; and

Transmitting unit transmitting said first converted part from a first base station to said terminal and transmitting said second converted part from a second base station to said terminal, wherein said first base station and said second base station simultaneously transmit signals belonging to said first signals for said first terminal {col.2, lines 32–41; Nishimura's system is a cellular system thus each cell has a base station providing signals to all mobile stations within its cell. Hence, when a mobile station of cell 1 moves to cell 2, normally it crosses an overlapping part of cell 1 and cell 2 (although Nishimura does not explicitly disclose the overlapping feature between cells, but this overlapping is inherent in cellular system wherein a mobile station is on the

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move from a cell to another---emphasis added). Therefore, in the overlapping part of the two cells 1-2, the moving mobile station receives both signals from base station 1 of the cell 1 and from base station 2 of cell 2. Also, because signal 64 kbps was being divided (demultiplexed) into a plurality of 11.2 kbps signals, thus 11.2 kbps signals were transmitted from n base stations to mobiles within its cell simultaneously---emphasis added}.

Regarding claim 24:

Nishimura discloses in figure 1 a communication method for a radio LAN system having $n-1$ ($n=3, 4, \dots$) base stations, comprising:

Receiving a time multiplexed input signal having a plurality of original data components, each original data component to be sent to a different terminal and occupying a single time slot {col.2, lines 4-6};

Dividing each original data component into $n-1$ sub-components, each of the sub-components containing a different and smaller portion of the respective original data component {col.2, lines 14-20};

Converting each of the sub-component into $n-1$ converted sub-components having a lower rate than that of the respective sub-components {col.2, lines 20-31}; and

Transmitting each of the $n-1$ converted sub-components of each original data component from a different one of the $n-1$ base stations to a corresponding terminal, wherein the $n-1$ base stations, respectively transmitting the $n-1$ converted sub-components, simultaneously transmit signals belongs to a specific one of the original data components for a corresponding terminal of the specific one of the original data components {col.2, lines 32-41; Nishimura's system is a cellular system thus each cell has a base station providing signals to all mobile stations within its cell. Also, because signal 64 kbps was being divided (demultiplexed) into a plurality of 11.2 kbps signals, thus 11.2 kbps signals were transmitted from n base stations to mobiles within its cell simultaneously---emphasis added}.

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Regarding claim 25:

Nishimura disclose in figure 1 a communication method for a radio LAN system having $n-1$ ($n=3, 4, \dots$) base stations, comprising:

A receiving unit receiving a time multiplexed input signal having a plurality of original data components, each original data component to be sent to a different terminal and occupying a single time slot {col.2, lines 4-6};

A dividing unit dividing each original data component into $n-1$ sub-components, each of the sub-components containing a different and smaller portion of the respective original data component {col.2, lines 14-20};

A converting unit converting each of the sub-component into $n-1$ converted sub-components having a lower rate than that of the respective sub-components {col.2, lines 20-31}; and

A transmitting unit transmitting each of the $n-1$ converted sub-components of each original data component from a different one of the $n-1$ base stations to a corresponding terminal, wherein the $n-1$ base stations, respectively transmitting the $n-1$ converted sub-components, simultaneously transmit signals belongs to a specific one of the original data components for a

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corresponding terminal of the specific one of the original data components {col.2, lines 32-41; Nishimura's system is a cellular system thus each cell has a base station providing signals to all mobile stations within its cell. Also, because signal 64 kbps was being divided (demultiplexed) into a plurality of 11.2 kbps signals, thus 11.2 kbps signals were transmitted from n base stations to mobiles within its cell simultaneously---emphasis added}.

Allowable Subject Matter

5. Claims 3-5, 8-9, 11-12 are allowable over prior art of the record.

Response to Arguments

6. Applicant's arguments filed 2-6-03 have been fully considered but they are not persuasive.

A/. Applicant argued that Nishimura does not teach "...transmitting said first converted part from a first base station to said terminal and transmitting said second converted part from a second base station to said terminal, wherein said first base station and said second base station simultaneously

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transmit signals belonging to said first signals for said first terminal.”(claims 22–23).

In reply, Nishimura discloses in figure 1 wherein the first converted part (demultiplexed signal at lower rate, 11.2 kbps) and the second converted part (11.2 kbps) are being transmitted simultaneously (as the signal 64 kbps was demultiplexed) from a plurality of base stations (i.e., base station 1 in cell 1 and base station 2 in cell 2) to a moving mobile station which is moving from cell 1 to cell 2 in the overlapping region of cell 1 and cell 2 (although Nishimura does not explicitly disclose the overlapping feature between cells, but this overlapping is inherent in the transition of a mobile station from a cell to another---emphasis added). Therefore, the moving mobile station receives both signals from each base station of corresponding cells 1–2.

B/. Applicant argued that Nishimura does not teach “transmitting each of the $n-1$ converted sub-components of each original data component from a different one of the $n-1$ base stations to a corresponding terminal, wherein the $n-1$ base stations, respectively transmitting the $n-1$ converted sub-

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components, simultaneously transmit signals belonging to a specific one of the original data components for a corresponding terminal of the specific one of the original data components.”(claims 24–25)

In reply, applicant is directed to column 2, lines 26–41 wherein the a plurality of base stations transmitting demultiplexed signals to a plurality of mobile stations in each of the base station within a cell.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuongchau Ba Nguyen whose telephone number is 703–305–0093. The examiner can normally be reached on Monday–Friday from 10:00 a.m. to 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Huy Vu can be reached on 703–308–6602. The fax phone numbers for the organization where this application or proceeding is assigned are 703–872–9306 for regular communications and 703–872–9306 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



Phuongchau Ba Nguyen
Examiner
Art Unit 2665

October 30, 2003



STEVEN H.D NGUYEN
PRIMARY EXAMINER